

**REMARKS**

This Amendment is a full and timely response to the aforementioned final Office Action. Entry of this Amendment is proper under 37 C.F.R. §1.116 since the Amendment: (a) places the application in condition for allowance (for the reasons discussed herein); (b) does not raise any new issues requiring further search and/or consideration; (c) satisfies a requirement of form asserted in the previous Office Action; and (d) places the application in better form for appeal, should an appeal be necessary. The Amendment is necessary and was not earlier presented because it is made in response to arguments raised in the final rejection. Entry of this amendment is respectfully requested. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

By this Amendment Applicants have amended the abstract to correct a typographical error, amended claim 1 to include the elements recited in previously canceled claim 2, and amend claims 4-8, 12, 13, and 16 to improve form. Support for the changes to claim 1 can be found variously throughout the drawings and specification. For example, support for the Amendment to claim 1 can be found in Fig. 2, and in the specification at page 12, line 20 through page 13, line 3. No new matter has been added. Claims 1 and 3-15 are pending.

**Objections to the Abstract**

The abstract was objected to for allegedly containing a misspelled word. As noted above Applicants have amended the Abstract to change the occurrence of “than” in the last line of the abstract to “thin.” Thus, Applicants respectfully request that the objection to the abstract be withdrawn.

**Rejections Under 35 U.S.C. §112**

Claim 16 was rejected under 35 U.S.C. §112, second paragraph for alleged indefiniteness. Applicants respectfully traverse this rejection.

Applicants have amended claim 16 in a manner that addresses and remedies those issues raised in the Office Action. In particular, claim 16 was amended to recite a separation layer as described in the specification, for example, at page 19, line 9 through page 20, line 13.

Accordingly, Applicants respectfully request that the rejection of claim 16 under §112, second paragraph be withdrawn.

### **Rejections Under 35 U.S.C. §102**

Claims 1, 3, 4, and 12 were rejected under 35 U.S.C. §102(e) as anticipated by *Futamoto et al.*, U.S. Patent No. 6,383,667. Applicants respectfully traverse this rejection.

Claim 1 recites a magnetic recording medium comprising a non-magnetic substrate; a non-magnetic metal ground layer formed on a main surface side of the non-magnetic substrate and containing an Ru concentration of at least 20 at%; and a magnetic layer formed on the non-magnetic metal ground layer and having a metal magnetic thin film, wherein the non-magnetic metal ground layer is constructed by sequentially stacking a plurality of layers, and wherein each stacked layer has an Ru concentration of at least 20 at%, and includes other compositions containing Ru and an element other than Ru.

*Futamoto* discloses a magnetic recording medium including a non-magnetic substrate 11, an underlayer 12 provided on the substrate, a Co alloy magnetic film formed through the underlayer 14, and a protective film for protecting the magnetic film 15. *See Abstract*. The underlayer 12 is a two layer structure, wherein a lower underlayer 12a is covered by an upper underlayer 12b. The upper underlayer 12b is covered by the Co alloy magnetic film 14, and can be a  $\text{Co—Ru}_x\text{—Cr}_y$  alloy, wherein the atomic concentration for  $x$  is  $5 \text{ atomic } \% < x \leq 65 \text{ atomic } \%$  and  $y$  is  $35 \text{ atomic } \% \geq y \geq 9 \text{ atomic } \%$ . *Futamoto* further discloses a number of embodiments illustrating various layer structures of the magnetic recording medium (see Figs. 2-4 and 7-9). In each embodiment, however, the upper underlayer was the only layer containing Ru or a material being made from an Ru mixture.

In contrast, claim 1 recites, among other things, wherein the non-magnetic metal ground layer is constructed by sequentially stacking a plurality of layers, wherein each stacked layer has an Ru concentration of at least 20 at%, and includes other compositions containing Ru and an element other than Ru. *Futamoto* fails to disclose, teach, or suggest at least the aforementioned claim element.

In addition, the Examiner asserts that a broad interpretation of “formed on” warrants an interpretation that additional layers may be present between first layer and another layer that is

“formed on” the first layer. However, even in spite of the Examiner’s broad interpretation of the claim language, Applicants submit that *Futamoto* still fails to disclose, teach, or suggest the magnetic recording medium as recited in claim 1.

To properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. See Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Because *Futamoto* fails to teach every element recited in claim 1, Applicants submit that *Futamoto* fails to anticipate claim 1. Accordingly, Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. §102 be withdrawn and claim 1 be allowed.

Claims 3, 4, and 12 depend either directly or indirectly from claim 1. By virtue of this dependency Applicants submit that these claims are allowable for at least the same reasons given above. Moreover, claims 3, 4, and 12 further distinguish over *Futamoto* by the subject matter recite therein, and particularity with respect to each claim combination. As a result, Applicants respectfully request that the rejection of claims 3, 4, and 12 under §102(e) be withdrawn and these claims allowed.

### **Rejections Under 35 U.S.C. §103**

Claims 5, 11, and 15 were rejected under 35 U.S.C. §103(a) as unpatentable over *Futamoto* in view of *Honda et al.*, U.S. Patent No. 5,851,643. Claim 6 was rejected under 35 U.S.C. §103(a) as unpatentable over *Futamoto* in view of *Shiroishi et al.*, U.S. Patent No. 4,833,020. Claims 7, 8, and 13 were rejected under 35 U.S.C. §103(a) as unpatentable over *Futamoto* in view of *Suzuki et al.*, U.S. Patent No. 6,335,103. Claims 9 and 10 were rejected under 35 U.S.C. §103(a) as unpatentable over *Futamoto* in view of *Wu et al.*, U.S. Patent No. 6,218,003. Claim 14 was rejected under 35 U.S.C. §103(a) as unpatentable over *Futamoto* in view of *Ranjan et al.*, U.S. Patent No. 5,976,326. Claim 16 was rejected under 35 U.S.C. §103(a) unpatentable over *Futamoto* modified by *Honda*, and further in view of *Ishikawa et al.*, U.S. Patent No. 5,750,230. Applicants respectfully traverse these rejections.

Claims 5-11 and 13-16 depend either directly or indirectly from independent claim 1. By virtue of this dependency, Applicants submit that claims 5-8, 11, and 13-16 are allowable for at least the same reasons given above. Moreover, neither *Honda*, *Shiroishi*, *Suzuki*, *Wu*, *Ranjan*,

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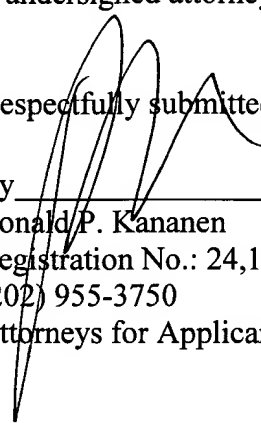
nor *Ishikawa* remedy the deficiencies of *Futamoto* discussed above. Most notably, the aforementioned references fail to disclose teach or suggest either singly or combined at least the non-magnetic metal ground layer is constructed by sequentially stacking a plurality of layers, wherein each stacked layer has an Ru concentration of at least 20 at%, and includes other compositions containing Ru and an element other than Ru, as recited in claim 1. Thus, Applicants respectfully request that the rejections of claims 5-11 and 13-16 under §103 be withdrawn, and these claims allowed.

**Conclusion**

Based on at least the foregoing amendments and remarks, Applicants submit that claims 1 and 3-16 are allowable, and this application is in condition for allowance. Accordingly, Applicants request favorable reexamination and reconsideration of the application. In the event the Examiner has any comments or suggestions for placing the application in even better form, Applicants request that the Examiner contact the undersigned attorney at the number listed below.

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Respectfully submitted,

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